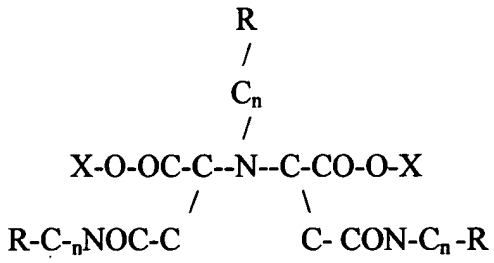
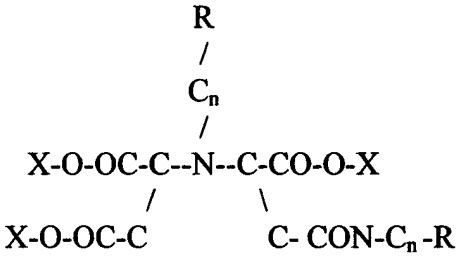
1. (Twice Amended) A chelating composition comprising a modified iminodisuccinic acid, or a salt thereof, having one or more of the following formulas:

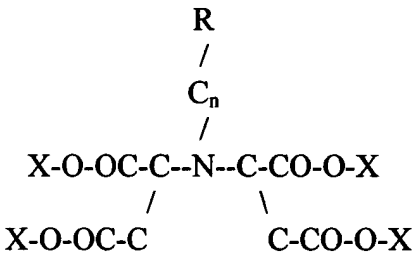
(a)



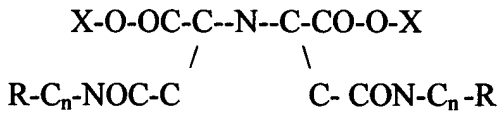
(b)



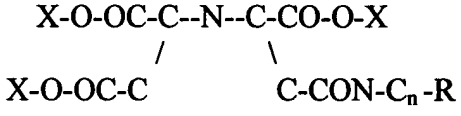
(c)



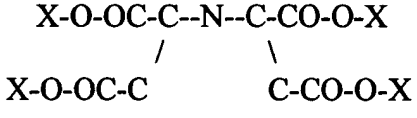
(d)



(e)



(f)



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal;

where n is 1 to 10; and

where R is a Lewis base capable of donating a nonbonded pair of electrons,

and wherein said composition is synthesized in a single vessel, at ambient pressure, without the addition of heat, whereunder a primary or secondary amide reaction occurs first followed by a radical reaction.

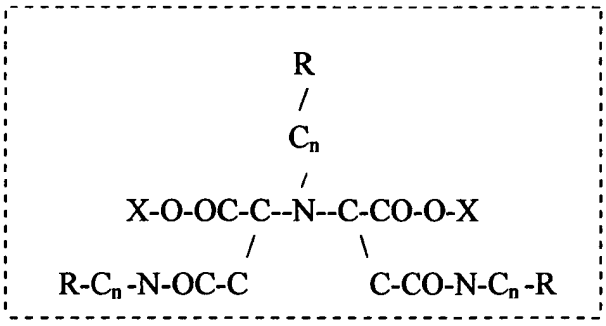
6. (Amended) A method for making a modified iminodisuccinic acid comprising:

mixing together an acid anhydride or lactone with a first polyfunctional amine and allowing said mixture to react to form an amide;

adding to said amide a second polyfunctional amine, maleic anhydride or acid salt, and water and allowing said mixture to react in said water to form said modified iminodisuccinic acid, and

wherein said synthesis occurs in a single vessel, at ambient pressure, and without the addition of heat.

11. (Twice Amended) The synthesis of compounds comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



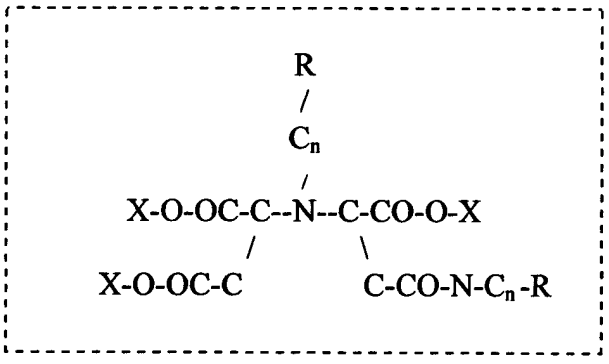
where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; n is 1 to 10, and R is a Lewis base capable of donating a nonbonded pair of electrons, wherein said synthesis comprises the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N-polyfunctional acid common name amide; and

(b) adding water, Me(OH), and a second polyfunctional amine to said N-polyfunctional acid common name amide and allowing same to react to form an imino di N- polyfunctional acid common name amide, and

wherein said synthesis occurs in a single vessel, at ambient pressure, and without the addition of heat.

15. (Twice Amended) The synthesis of compounds comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



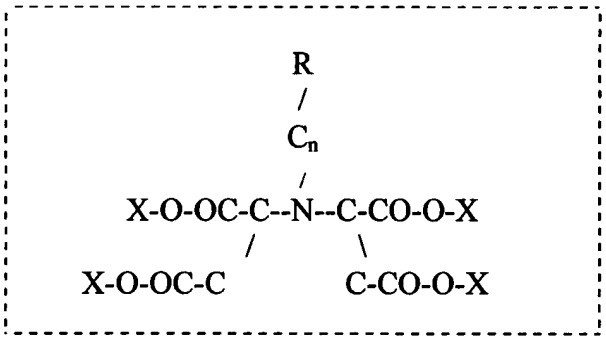
where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts, n is.1 to 10, R is a Lewis base capable of donating a nonbonded pair of electrons, and Me is selected from the alkali metals, wherein said synthesis comprises the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N- polyfunctional acid common name amide; and

(b) adding to said N- polyfunctional acid common name amide, water, a second polyfunctional amine, an acid anhydride or lactone, a Me (OH), and allowing same to react to form said compounds, and

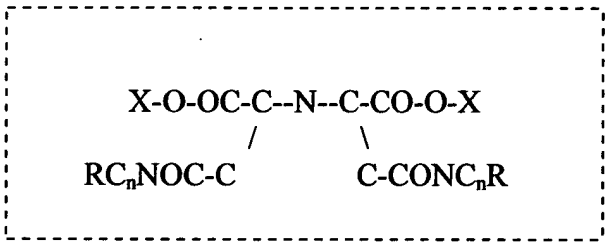
wherein said synthesis occurs in a single vessel, at ambient pressure, and without the addition of heat.

19. (Twice Amended) The synthesis of compounds comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts, where n is 1 to 10; where R is a Lewis base capable of donating a nonbonded pair of electrons, wherein said synthesis comprises the steps of: adding maleic anhydride or malic acid to Me(OH) + polyfunctional amine + water, and allowing same to react to form the N, N-disuccinicamino(:functional group), and wherein said synthesis occurs in a single vessel, at ambient pressure, and without the addition of heat.

23. (Amended) The synthesis of compounds comprising at least one poly functional substitution on iminodisuccinic acid having the following formula;



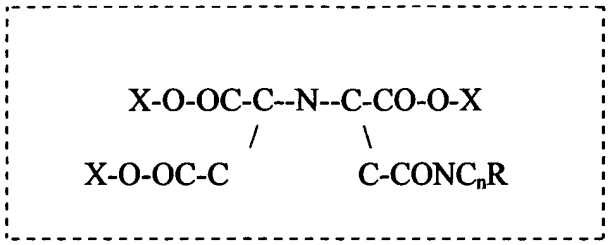
where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts; where n is 1 to 10, where R is a Lewis base capable of donating a nonbonded pair of electrons; wherein said synthesis comprises the steps of:

(a) adding acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form a N- polyfunctional acid common name amide;

(b) adding to said N- polyfunctional acid common name amide, water + ammonia + Me(OH), and allowing same to react to form an N,N- amino polyfunctional acid common name amide, and

wherein said synthesis occurs in a single vessel, at ambient pressure, and without the addition of heat.

27. (Amended) The synthesis of compounds comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X may be H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; where n may be 1 to 10; where R may be a lewis base capable of donating a nonbonded pair of electrons; wherein said synthesis comprises the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form an N- polyfunctional acid common name amide;

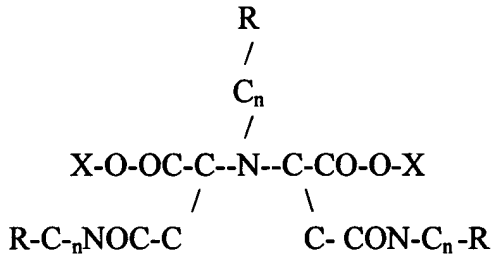
(b) adding to said N- polyfunctional acid common name amide, water, ammonia + maleic anhydride or maleic acid (salt) and allowing same to react to form said compounds, and

wherein said synthesis occurs in a single vessel, at ambient pressure, and without the addition of heat.

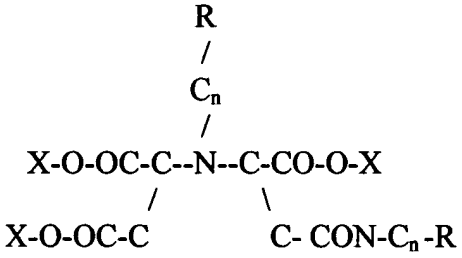
MARKED-UP VERSION TO SHOW CHANGES

1. (Twice Amended) A chelating composition comprising a modified iminodisuccinic acid, or a salt thereof, having one or more of the following formulas:

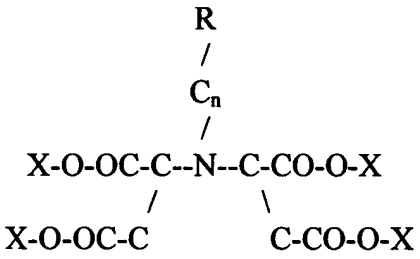
(a)



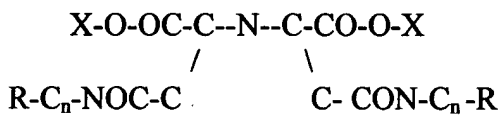
(b)



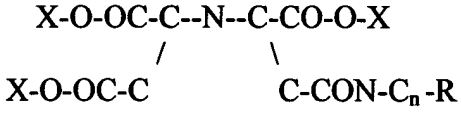
(c)



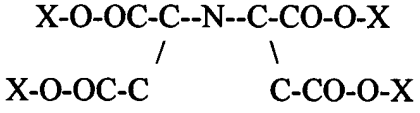
(d)



(e)



(f)



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal;

where n is 1 to 10; and

where R is a Lewis base capable of donating a nonbonded pair of electrons,

and wherein said composition is synthesized in a single vessel, at ambient pressure, without the addition of heat, whereunder a primary or secondary amide reaction occurs first followed by a radical reaction.

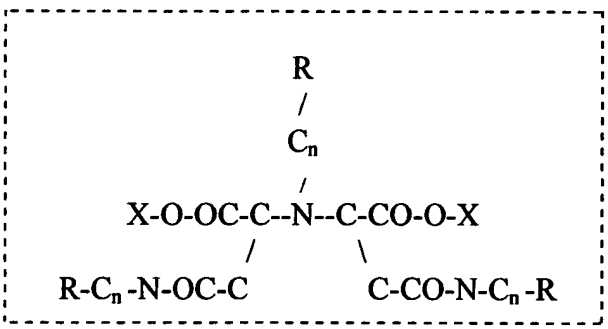
6. (Amended) A method for making a modified iminodisuccinic acid comprising:

mixing together an acid anhydride or lactone with a first polyfunctional amine and allowing said mixture to react to form an amide;

adding to said amide a second polyfunctional amine, maleic anhydride or acid salt, and water and allowing said mixture to react in said water to form said modified iminodisuccinic acid, and

wherein said synthesis occurs in a single vessel, at ambient pressure, and without the addition of heat.

11. (Twice Amended) The synthesis of compounds comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



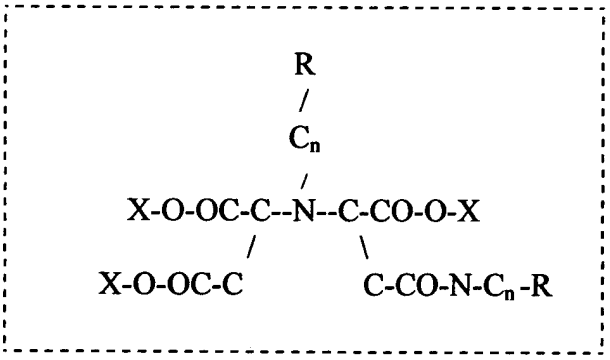
where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; n is 1 to 10, and R is a Lewis base capable of donating a nonbonded pair of electrons, wherein said synthesis comprises the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N-polyfunctional acid common name amide; and

(b) adding water, Me(OH), and a second polyfunctional amine to said N-polyfunctional acid common name amide and allowing same to react to form an imino di N- polyfunctional acid common name amide, and

wherein said synthesis occurs in a single vessel, at ambient pressure, and without the addition of heat.

15. (Twice Amended) The synthesis of compounds comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



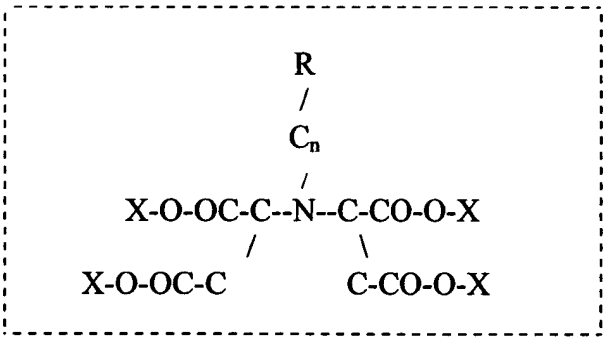
where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts, n is.1 to 10, R is a Lewis base capable of donating a nonbonded pair of electrons, and Me is selected from the alkali metals, wherein said synthesis comprises the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine, and allowing same to react to form a N- polyfunctional acid common name amide; and

(b) adding to said N- polyfunctional acid common name amide, water, a second polyfunctional amine, an acid anhydride or lactone, a Me (OH), and allowing same to react to form said compounds, and

wherein said synthesis occurs in a single vessel, at ambient pressure, and without the addition of heat.

19. (Twice Amended) The synthesis of compounds comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:

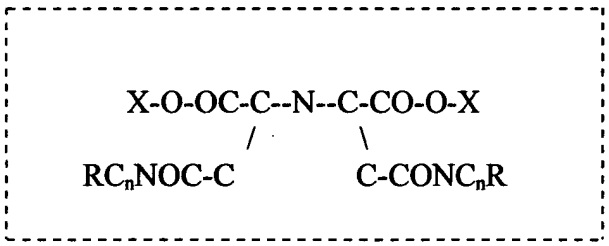


where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts, where n is 1 to 10; where R is a Lewis base capable of donating a nonbonded pair of electrons, wherein said synthesis comprises the steps of:

adding maleic anhydride or malic acid to Me(OH) + polyfunctional amine + water, and allowing same to react to form the N, N-disuccinicamino(:functional

group), and wherein said synthesis occurs in a single vessel, at ambient pressure, and without the addition of heat.

23. (Amended) The synthesis of compounds comprising at least one poly functional substitution on iminodisuccinic acid having the following formula;



where X is H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal salts; where n is 1 to 10, where R is a Lewis base capable of donating a nonbonded pair of electrons; wherein said synthesis comprises the steps of:

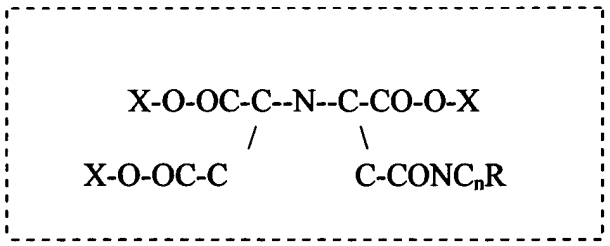
(a) adding acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form a N- polyfunctional acid common name amide;

(b) adding to said N- polyfunctional acid common name amide, water + ammonia + Me(OH), and allowing same to react to form an N,N- amino polyfunctional acid common name amide, and

wherein said synthesis occurs in a single vessel, at ambient pressure, and without the addition of heat.

(Amended)

27. The synthesis of compounds comprising at least one poly functional substitution on iminodisuccinic acid having the following formula:



where X may be H, alkali, alkaline earth, ammonium-substituted radical, ammonium or transition metal; where n may be 1 to 10; where R may be a lewis base capable of donating a nonbonded pair of electrons; wherein said synthesis comprises the steps of:

(a) adding an acid anhydride or lactone to a first polyfunctional amine and allowing same to react to form an N- polyfunctional acid common name amide;

(b) adding to said N- polyfunctional acid common name amide, water, ammonia + maleic anhydride or maleic acid (salt) and allowing same to react to form said compounds, and

wherein said synthesis occurs in a single vessel, at ambient pressure, and without the addition of heat.